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PATENT
Attorney Docket N^o 98-0674

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Brandon A. Grooters
Serial N^o : 09/238,375
Filed : January 27, 1999
Group Art Unit : 2773
Examiner : Luu, S.
For : METHOD AND APPARATUS FOR AUTOMATICALLY
GENERATING A DEVICE USER INTERFACE

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TC 2100 MAIL ROOM

Assistant Commissioner for Patents
Washington, DC 20231

TRANSMITTAL OF APPEAL BRIEF

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Penny L. Flint
Penny L. Flint

DATED: April 11, 2001

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PATENT
Attorney Docket No.
98 0674

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2 of 3

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of : Grooters
Serial No. : 09/238,375
Filed : January 27, 1999
Art Unit : 2773
Examiner : Luu, S.
Title : *METHOD AND APPARATUS FOR AUTOMATICALLY
GENERATING A DEVICE USER INTERFACE*

Appeal No.:

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Assistant Commissioner for Patents
Washington, D.C. 20231

APPELLANT'S BRIEF ON APPEAL

This is an appeal from the final rejection of the Examiner dated September 21, 2000 finally rejecting claims 1-20.

(1) REAL PARTY IN INTEREST

The real party in interest is Spotware Technologies of San Diego, California, the assignee of the entire interest

(2) RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any related appeals or interferences.

(3) STATUS OF CLAIMS

The application was filed on January 27, 1999 with twenty (20) claims, of which Claims 1, 6, 11 and 16 are independent.

All of the claims were rejected in the Examiner's action dated March 29, 2000.

In Appellant's response dated June 28, 2000, Claims 1, 6, 11, and 16 were amended.

The Examiner, in the next Office Action dated September 21, 2000, made a final rejection of all of the claims (Claims 1-20).

In Appellant's response dated December 21, 2000, no further amendments were made.

The Examiner in the Advisory Action dated January 23, 2001, indicated that Appellant's arguments were not persuasive and the status of the claims is as follows:

Claims allowed: none

Claims objected to: none

Claims rejected: 1-20.

(4) STATUS OF AMENDMENTS AFTER FINAL

No amendment to the claims or specification was proffered after final.

(5) SUMMARY OF INVENTION

Appellant's invention is directed to a system and method for generating a device user interface executable by an information handling system. In one embodiment of the present invention as shown in FIGS. 1 & 2, the system 100 includes a processor 102 for executing instructions on the information handling system and a memory 104 coupled to the processor for storing instructions executed by the processor 102. A device database 214 is also included, the device database 214 having a list of devices 216, 218 & 220 for which user interface components are available to implement functions for controlling the devices. Additionally, a resource database 222 stored separately from the device is included in which the resource database 222 includes the user interface components. Further, a user interface generator 212 is included suitable for determining whether the device is included in the device database and for retrieving the user interface components from the resource database 222. Moreover, a layout manager 230 is included for assembling the user interface components retrieved by the user interface generator 212 into a user interface 232 executable by the information handling system 100 to control the device.

In a further aspect of the invention, the user interface may be created without user intervention.

In yet a further aspect of the invention, generic device user interface components are provided.

(6) ISSUES

I. Whether the Examiner has properly rejected Claims 1-11, 13-16 and 18-20 under 35 U.S.C. 103(a) as being unpatentable over Douma et al. U.S. Patent No 5,990,884.

II. Whether the Examiner has properly rejected Claims 12 and 17 under 35 U.S.C. 103(a) as being unpatentable over Douma et al. U.S. Patent No 5,990,884 in view of Naughton et al. U.S. Patent No 6,020,881.

(7) GROUPING OF CLAIMS

It is the Appellant's intention that the rejected claims be grouped in accordance with the Examiner's rejections as follows:

For the rejections based on prior art, Group 1 should comprise 1-2, 5-11, 13-16 and 18-20; Group 2 should comprise Claims 3 and 4; and Group 3 should comprise claims 12 and 17. These groupings should be addressed separately in view of the Examiner's rejections wherein different reasoning of the references is relied upon.

(8) ARGUMENT

ISSUE I

Claims 1-11, 13-16 and 18-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Douma et al. U.S. Patent No 5,990,884.

Group 1

Regarding Claims 1-2, 5-11, 13-16 and 18-20, the Examiner stated in the Final Office Action that Douma discloses the invention substantially as claimed. Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. The Examiner has failed to correctly ascertain and set forth the differences

between the claimed invention and the prior art. As a result, the proposed modification would not result in the Appellants' claimed invention. Accordingly, the rejection is untenable and should be reversed.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). *See also In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970).

The Examiner first asserts that the Douma reference shows a device database including a listing of available user interface components at Col. 4, Lines 59-65.

In step 210, Intelligent A/V receiver 10 identifies, based on the media I.D., the multimedia component for replaying the user-selected recording medium. A look-up table, for example, may be user for such a purpose: a table stored in RAM, for example, containing media I.D. corresponding to the multimedia component (VTR 16, CD player 18, DAT player 20) in A/V system 14. *Col. 4, Lines 59-65.*

However, contrary to the Examiner's assertion, the referenced section discloses identifying a multimedia component for replaying a user-selected recording medium. Thus, Douma discloses utilizing an appropriate device to play a song as selected from a listing of songs, and not "a listing of available user interface components" for implementing control functions of a device coupled to an information handling system, as claimed in Claims 1, 6, 11, 16.

The Examiner further asserts that resource data including the user interface components is described at Douma, Col. 6, Lines 57-61, which states "the interface data required for connecting the multimedia component of A/V system 14 to Intelligent A/V receiver 10 is located in a data storage (RAM, ROM, or other memory device) of that component." Again, it is respectfully submitted that the Examiner has misinterpreted user interface component of the present application with a multimedia component of Douma. In Douma, a complete user interface is obtained from the device itself, the device being a multimedia component as shown in Col. 1, Lines 13-25.

Control of multimedia information in audio/video/data systems may be one of the greatest challenges in today's highly integrated systems comprising many multimedia components. The existence of 200 Compact disk (CD) changer, for example, creates difficulties in determining how to access the required information on the disk in a simple and user friendly manner. Hence, users must have means for accessing the multimedia components and information on the recording medium with minimum of

effort on their part. Further, when multimedia components, such as the CD changer, the Video Tape Recorder (VTR), etc. are connected into a single integrated system, interface specifications for each component are typically kept at some central controlling device. *Col. 1, Lines 13-25*

However, user interface components of the present invention include modular interfaces, which may be structured in the form of an object, to provide an interface function. *See Patent Application, Pages 7-8.* Nowhere in the Douma reference is such a user interface component described.

Additionally, the Examiner states that “a user interface generator for determining whether the device is included in said device data and for retrieving the user interface components for that device from said resource database without requiring user interaction, and a layout manager for assembling the user interface components retrieved by said user interface generator into a user interface executable by the information handling system to control the device” is disclosed at Col. 7, Lines 13-40, and Col. 6, Lines 45-61. The Appellant respectfully disagrees. As shown in the referenced excerpts, nowhere in the sections is such a teaching or suggestion included.

Douma, Col. 6, Line 45-61

The prior art one-way communication may present a problem in the systems where additional components are to be added. In these conventional system, the controlling device must be reprogrammed (updated) with the new interface information to add this new component to the system. To overcome the above disadvantage, FIG. 5 shows VTR 15 and CD player 18 containing programmable processor 52, 52' and various software modules comprising the interface specification for those components. The program instruction in those software modules are executed by programmable processors 52, 52'. Namely, in accordance with another aspect of the present invention, the interface data required for connecting the multimedia component of A/V system 14 to Intelligent A/V receiver 10 is located in a data storage (RAM, ROM, or other memory device) of that component. *Col. 6, Lines 45-61.*

Douma, Col. 7, Lines 13-38

In operation, as illustrated in FIG. 6, using the GUI program at PC/Web TV 26, the user selects a multimedia component in his or her A/V system 14 and requests control of that component in step 600. In step 602, the selected multimedia component transfers an appropriate application program to Intelligent A/V receiver 10. The application program includes interface specification (modules 136, 138, 140 and 142 of FIG. 5) for that particular component. Once the application program is transferred to

Intelligent A/V receiver 10, the graphics image of the component and its control switches are displayed in step 604 for user manipulation and control. That is, all of the necessary graphics and control files in a single application are transferred from the multimedia component for providing a seamless interface between that component and Intelligent A/V receiver 10 without the need for controller update, and for allowing the user to control A/V system 14 using PC/Web TV 26. In yet another aspect of the present invention, various sound field, based on the music type and the room in which A/V system 14 is located, are generated and transferred to Intelligent A/V receiver 10 for use in the appropriate interface application program. The sound field create the listening effect, as if one is, for example, in a jazz club listening to jazz, by using the room configuration and objects in the room. *Col. 7, Lines 12-38.*

Nowhere in the above listed sections, or elsewhere in the Douma reference, contain a teaching or suggestion of a user interface generator that retrieves user interface components which are assembled by a layout manager into a user interface, as claimed in Claims 1 and 6. The Douma reference merely passes a user interface from a multimedia component to an A/V system to enable the A/V system to connect to the component. In the present invention, a user interface is assembled and created from user interface components, available in a database separate from the device, automatically without user intervention, as described in Claims 1, 6, 11 and 16. In the Final Office Action dated September 21, 2000, the Examiner stated that such an implementation would be an obvious implementation option, depending on the design consideration, to an artisan at the time of the invention. Appellant requested that the Examiner provide the motivation to support his contention with a reference or an affidavit. To date, the Examiner has not done so.

Additionally, no teaching or suggestion is found to employ a centralized device database of the present invention. Specifically, a resource database including the user interface components where the resource database is stored separately from the device as stated in Claims 1, 6, 11, and 16 is not taught or suggested by the Douma reference. The rejection contains only the Examiner's statement asserting the following:

Although Douma discloses the resource database to be separate databases stored individually in each device rather than a single database containing resources of all device, however, it would have been obvious to an artisan at the time of the invention to use any one of the two options depending on the implementation method.

Again, Appellant requested that the Examiner provide the motivation to support his contention that it would have been obvious to an artisan at the time of the invention to use any one of the two options depending on the implementation method, either by reference or affidavit. To date, the Examiner has not done so. Appellant submits that the reason is that there is no motivation, since to make the proposed change would not result in the present invention. In the Douma reference, an interface is retrieved from a device, and is not generated and combined as in the present invention. Since there is no generation in the Douma reference, there is no motivation for a centralized database of user interface components, since such a database would be contrary to Douma's teaching, specifically, the retrieval of an interface from a device itself.

Further, the Examiner, in the Office Action dated December 21, 2000, stated that using a centralized resource database for holding device interface data is well known in the art and referenced Douma, Col. 1, Lines 22-26. However, the referenced paragraph as a whole not only fails to teach the present invention, it also teaches away from the present invention, as shown in the following excerpt from Douma, Col. 1, Lines 22-33.

Further, when multimedia components, such as the CD changer, the Video Tape Recorder (VTR), etc. are connected into a single integrated system, interface specifications for each component are typically kept at some central controlling device. If a new component is added to the system, the controlling device must be updated with the interface specification for this new component. This inconvenient procedure is also prone to error resulting in the inoperative component due to the high likelihood of entering incorrect information in the controlling device. This will present the newly added multimedia component from functioning in the system.

Thus, this reference teaches a system that when confronted with a new component requires the loading of a new interface which is "inconvenient", "prone to error" and which may result in a "high likelihood of entering incorrect information in the controlling device". When viewed in conjunction with the rest of the Douma specification, it is readily apparent that Douma addressed these problems by providing a user interface in each device, the interface being transferred to the system to enable communication with the device. Therefore, Douma provides a system of devices wherein each device includes its own interface that may be transferred. However, the present invention includes device data and resource data stored separately from a device, a generator that retrieves user

interface components and a layout manager that assembles the user interface components into a user interface. Thus, Douma does not teach or suggest a device database and a resource database utilized to generate a user interface as claimed in claims 1 and 6, nor a database of interface components utilized to generate a user interface as claimed in Claims 11 and 16.

An advantage of such a centralized database, as provided by Applicant's specification, is that the resources database may be updated via a single information storage medium or via downloading updated information via a network (page 9, lines 23-31). In addition, such a centralized resource database allows for the user interface generator to retrieve user interface components from the resources database without user intervention (page 10, lines 29-31), as claimed in Claims 1 and 6. Thus, as indicated by the cited passages of Applicant's specification, storing the interface components in a separate database is no mere rearrangement, but rather an additional feature not taught by Douma that provides advantages not taught by Douma.

Assuming for the sake of argument that such a modification could be performed, as stated in *In re Fritch*, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." 23 U.S.P.Q. 2d 1780, 1783-84 (Fed. Cir. 1992). In the present example, since Douma teaches away from a centralized database, the Douma reference may not then be used to make obvious the modification it explicitly disparages. It is well established that a proposed modification cannot support a *prima facie* case of obviousness if to do so would render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

Accordingly, absent some teaching, motivation or suggestion to not only utilize a user interface generator that retrieves user interface components to have them assembled by a layout manager into a user interface, but also a centralized database for holding device interface data separate from the device, a *prima facie* case of obviousness has not been established and reversal of the Examiner's rejection is respectfully requested.

Group 2

Regarding Claims 3 and 4, the Examiner asserts that “by disclosing an automatic ‘two-way’ communication method between multimedia devices and the controlling system, Douma indicates/suggests that the device and resource databases are created without requiring user intervention.” The Appellant respectfully disagrees. In fact, Douma discloses no such “automatic” system, nor does Douma disclose a device database created without user intervention as claimed, nor does Douma disclose a resource database created without user intervention as claimed in Claims 3 and 4. The cited passage of Douma (col. 6, lines 45-61) merely describes the inclusion of a processor and interface data in each individual multimedia device. Nowhere does the cited passage discuss or mention the concepts of “automatic” or “without user intervention” as asserted by the Examiner. Douma teaches away from such concepts in FIG. 6 and in Col. 7, Lines 13-30 in which user intervention is specifically required.

The Examiner, in the Final Office Action Dated September 21, 2000, when addressing user intervention, asserted that the user intervention is only for the determination of a device to be selected, but not for the process of accessing the device interface specifications, nor for the creation of the device-resource databases as claimed. However, the Examiner failed to point out where such teaching is indicated in the reference. The Appellant respectfully submits that the Examiner has not done so because there is no teaching or suggestion in the reference to support automatic generation, nor the generation of a user interface as claimed and described.

Accordingly, a *prima facie* case of obviousness has not been established and reversal of the Examiner’s rejection is respectfully requested.

ISSUE II

Claims 12 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Douma et al. U.S. Patent No 5,990,884 in view of Naughton et al. U.S. Patent No 6,020,881.

Group 3

Regarding Claims 12 and 17, the Examiner stated in the Final Office Action that Douma discloses the invention substantially as claimed, but fails to teach the step of

selecting generic device user interface components in the event the device is not listed in the database. The Examiner relies on Naughton for teaching a method for controlling devices using an intuitive GUI. Again, Appellant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness. The Examiner has failed to correctly ascertain and set forth the differences between the claimed invention and the prior art. As a result, the proposed modification would not result in the Appellants' claimed invention. Accordingly, the rejection is untenable and should be reversed.

As stated earlier, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580. *See also In re Wilson*, 165 U.S.P.Q. 494.

The Examiner first asserts that at Col. 30, Lines 10-32 of Naughton, a generic user interface program object is used when a device is not available in the database. However, there is no motivation for such a combination, and as such, the references are not properly combinable. As stated, Douma teaches an interface stored on a device which may be utilized to control the device. As such, the interface is available from the device when accessed. Therefore, the instance in which the interface is not accessible, and the necessity of creating a generic interface would not be encountered. In Naughton, as cited by the Examiner, a user, to enable communication between the remote and the device, enters a model number to access control codes. This does not teach, suggest or supply the motivation for the present invention. It is respectfully submitted that the Examiner has improperly used the present application in an attempt to piece together references in order to arrive at the present invention. As stated by the Federal Circuit, it is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *See In re Fritch* 972 F.2d 1260 (Fed Cir. 1992) and *In re Fine*, 5, USPQ 2d 1596, 1600 (Fed. Cir. 1988).

Even assuming for the sake of argument that such motivation is available, the combination would not result in the present invention. Entering a model number by a user to get a control code for controlling a device in combination with an interface specification stored on a multimedia component is not the present invention. In

Appellant's invention as claimed in Claims 12 and 17, generic device user interface components are retrieved from a database of interface components stored separately from the device for implementing specific functions of the device to form a user interface when a compared identified device is not listed in a database of devices.


Accordingly, a *prima facie* case of obviousness has not been established and reversal of the Examiner's rejection is respectfully requested.

CONCLUSION

For the above reasons, it is respectfully requested that in each of the rejections discussed herein under 35 U.S.C. §103(a), the Examiner has failed to meet the burden in establishing a *prima facie* basis for the rejections. Accordingly, reversal of all outstanding rejections is earnestly solicited.

Respectfully submitted,
Grooters et al.,
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Dated: April 11, 2001

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CLAIMS

- 1 1. A system for generating a device user interface executable by an information
2 handling system, comprising:
3 a processor for executing instructions on the information handling system and a
4 memory coupled to said processor for storing instructions for execution by said
5 processor;
6 a device database including listing available user interface components for
7 implementing control functions of a device coupled to the information handling system;
8 a resource database including the user interface components, said resource
9 database being stored separately from the device;
10 a user interface generator for determining whether the device is included in said
11 device database and for retrieving the user interface components for that device from said
12 resource database without requiring user intervention; and
13 a layout manager for assembling the user interface components retrieved by said
14 user interface generator into a user interface executable by the information handling
15 system to control the device.
- 1 2. A system as claimed in claim 1, wherein the device is a multimedia device
2 controlled by the information handling system.
- 1 3. A system as claimed in claim 1, wherein said device database is created without
2 requiring user intervention.
- 1 4. A system as claimed in claim 1, wherein said resource database is created without
2 requiring user intervention.
- 1 5. A system as claimed in claim 1, wherein the user interface components of said
2 resource database comprise discrete objects.
- 1 6. A system for generating a device user interface executable by an information
2 handling system, comprising:

3 means for executing instructions on the information handling system and means,
4 coupled to said executing means, for storing instructions for execution by said processor;
5 means for listing available means for implementing control functions of a device
6 coupled to the information handling system;
7 means for storing the implementing means, said storing means being separate
8 from the device;
9 means for determining whether the device is included in said device list storing
10 means, and for retrieving the implementing means from said implementing means storage
11 means, said determining means being capable of operating without user intervention; and
12 means for assembling the implementing means retrieved by said determining and
13 generating means into a user interface executable by the information handling system to
14 control the device.

1 6. A system as claimed in claim 6, wherein the device is a multimedia device
2 controlled by the information handling system.

1 8. A system as claimed in claim 6, wherein said device list storing means is created
2 without requiring user intervention.

1 9. A system as claimed in claim 6, wherein said implementing means storing means
2 is created without requiring user intervention.

1 10. A system as claimed in claim 6, wherein the implementing means comprises a
2 discrete object variable.

1 11. A computer implemented method for generating a device user interface for an
2 information handling system, comprising:
3 identifying a device coupled to the information handling system to be
4 controlled by the user interface;

5 comparing the identified device to a database of devices for which user interface
6 resource components are available for implementing the functions of the device and
7 determining whether the device is listed in the database;
8 retrieving user interface components from a database of interface components
9 stored separately from the device for implementing functions of the device; and
10 creating the user interface from the user interface components.

1 12. A method as claimed in claim 11, further comprising the steps of, in the event the
2 device is not listed in the database, determining whether a similar device similar
3 to the device is listed in the database; in the event a similar device is not listed in
4 the database, executing said generic device user interface components retrieving
5 step; otherwise, executing said device specific user interface components
6 retrieving step.

1 13. A method as claimed in claim 11, further comprising the step of displaying the
2 user interface on a display coupled to the information handling system such that a
3 user may control the device with the user interface.

1 14. A method as claimed in claim 11, said creating step being implemented without
2 requiring user intervention.

1 15. A method as claimed in claim 11, the user interface components comprising
2 discrete objects.

1 16. A computer implemented program of instructions stored on a computer readable
2 medium and executable by an information handling system, the contents of the program
3 of instructions causing an information handling system to execute steps for generating a
4 device user interface for the information handling system, the steps comprising:
5 identifying the device coupled to the information handling system to be
6 controlled by the user interface;

7 comparing the identified device to a database of devices for which user interface
8 resource components are available for implementing the functions of the device and
9 determining whether the device is listed in the database;
10 retrieving user interface components from a database of interface components
11 stored separately from the device for implementing specific functions of the device; and
12 creating the user interface from the assembled user interface components.

1 17. A program of instructions as claimed in claim 16, the steps further comprising the
2 steps of, in the event the device is not listed in the database, determining whether a
3 similar device similar to the device is listed in the database; in the event a similar
4 device is not listed in the database, executing said generic device user interface
5 components retrieving step; otherwise, executing said device specific user interface
6 components retrieving step.

1 18. A program of instructions as claimed in claim 16, the steps further comprising the
2 step of displaying the user interface on a display coupled to the information
3 handling system such that a user may control the device with the user interface.

1 19. A program of instructions as claimed in claim 16, said assembling step being
2 implemented without requiring user intervention.

1 20. A program of instructions as claimed in claim 16, the user interface components
2 comprising discrete objects.